## EXAMINER'S AMENDMENT

### *Continued Examination Under 37 CFR 1.114*

1.  A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection.  Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.  Applicant's submission filed on March 17, 2009 has been entered.

2.  An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

3.  Authorization for this examiner's amendment was given in a telephone interview with Pedro Fernandez on June 4, 2009.

4.  Please amends claims 1, 7, and 13 as follows:

Claim 1. (Currently Amended) A virtual path configuration apparatus included in each of nodes in a virtual private network to interconnect a plurality of user networks via virtual paths and that is arranged in each node, comprising:

a configuration information setting unit that includes an input device <u>for receiving configuration information over a control network</u> for inputting setting commands and information on ports accommodating user networks and nodes providing the ports, and that sets configuration information that is information about sets of the ports and the nodes;

a configuration information sharing unit that shares the configuration information with the other one of the virtual path configuration apparatuses included in the other one of the nodes, by transmitting the configuration information being set by the configuration information setting unit to the other virtual path configuration apparatuses <u>over the control network,</u> or ~~the~~ receiving <u>the</u> configuration information from the other virtual path configuration apparatuses <u>over the control network</u>, wherein the configuration information sharing unit also includes a synchronization determination section that receives a response message <u>over the control network</u> to confirm each entry is synchronized with each of the other nodes; and

a virtual path configuration unit that configures the virtual paths between any combination of two of shared ports over ~~the~~ <u>a</u> relay network to relay packets between user networks based on the shared configuration information.

Claim 7. (Currently Amended) A virtual path configuration method executed on a virtual path configuration apparatus included in each of nodes  in a virtual private network for interconnecting a plurality of user networks via virtual paths and that is arranged in each node, comprising:

inputting setting commands and information on ports accommodating user networks and nodes providing the ports <u>based on configuration information received over a control network</u>;

setting <u>the</u> configuration information that is information about sets of the ports and the nodes;

transmitting the configuration information to or receiving the configuration information from other virtual path configuration apparatuses included in other one of the nodes <u>over the control network</u>;

sharing the configuration information with the other one of the virtual path configuration apparatuses included in the other one of the nodes <u>over the control network</u>, the configuration information being set by the configuration information setting unit, and determining synchronization by receiving <u>a</u> response message <u>over the control network</u> to confirm each entry is synchronized with each of the other nodes; and

configuring virtual paths between any combination of two of shared ports over ~~the~~ <u>a</u> relay network to relay packets between user networks based on the shared configuration information.

Claim 13. (Currently Amended) A computer readable recording medium storing instructions, which when executed by a computer in a virtual path configuration apparatus included in each of nodes in a virtual private network for interconnecting a plurality of user networks via virtual paths and that is arranged in each node, causes the computer to perform operations, comprising:

inputting setting commands and information on ports accommodating user networks and nodes providing the ports <u>based on configuration information received over a control network</u>;

setting <u>the</u> configuration information that is information about sets of the ports and the nodes;

transmitting the configuration information to or receiving the configuration information from other virtual path configuration apparatuses included in other one of the nodes <u>over the control network</u>;

sharing the configuration information with the other one of the virtual path configuration apparatuses included in the other one of the nodes <u>over the control network</u>, the configuration information being set by the configuration information setting unit, and determining synchronization by receiving a response message <u>over the control network</u> to confirm each entry is synchronized with each of the other nodes; and

configuring virtual paths between any combination of two of shared ports over ~~the~~ <u>a</u> relay network to relay packets between user networks based on the shared configuration information.

*Allowable Subject Matter*

5. Claims 1-18 are allowed.

6. The following is an examiner's statement of reasons for allowance:

The examiner has not found a virtual path configuration apparatus (in a node) or method used in an IP-VPN which receives configuration information over a control network, determines virtual paths between shared ports (of nodes) between any two users in user networks, shares the configuration information with other virtual path configuration apparatuses (in other nodes) over the control network, synchronizes between nodes by response message signaling (prior to transmitting) on the control network, and transmits information on virtual paths between user networks over a relay network.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for

Allowance."


*Conclusion*


8. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

(a) Jain et al. (USP 6,047,325), Network device for supporting construction of virtual

local area networks on arbitrary local and wide area computer networks.

(b) Chase et al. (USP 6,081,524), Frame relay switched data service.

(c) Sugiyama (USP 6,967,954), ATM Edge node switching utilized IP-VPN function.

(d) Birenback et al. (USP 6,594,704), Method of managing and using multiple virtual

private networks in a router with a single routing table.

(e) McDysan (USP 6,778,498), Virtual Private Network (VPN)-aware customer premises

equipment (CPE) Edge Router.

(f) Chase et al. (USP 7,463,627), Frame relay switched data service.


9. Any inquiry concerning this communication or earlier communications from the examiner

should be directed to MARK A. MAIS whose telephone number is (571)272-3138. The

examiner can normally be reached on M-Th 9am-8pm.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,
Pankaj Kumar can be reached on 571-272-3011. The fax phone number for the organization
where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would
like assistance from a USPTO Customer Service Representative or access to the automated
information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 4, 2009

/Mark A. Mais/

Examiner, Group Art Unit 2419

/Michael J. Moore, Jr./

Primary Examiner, Art Unit 2419